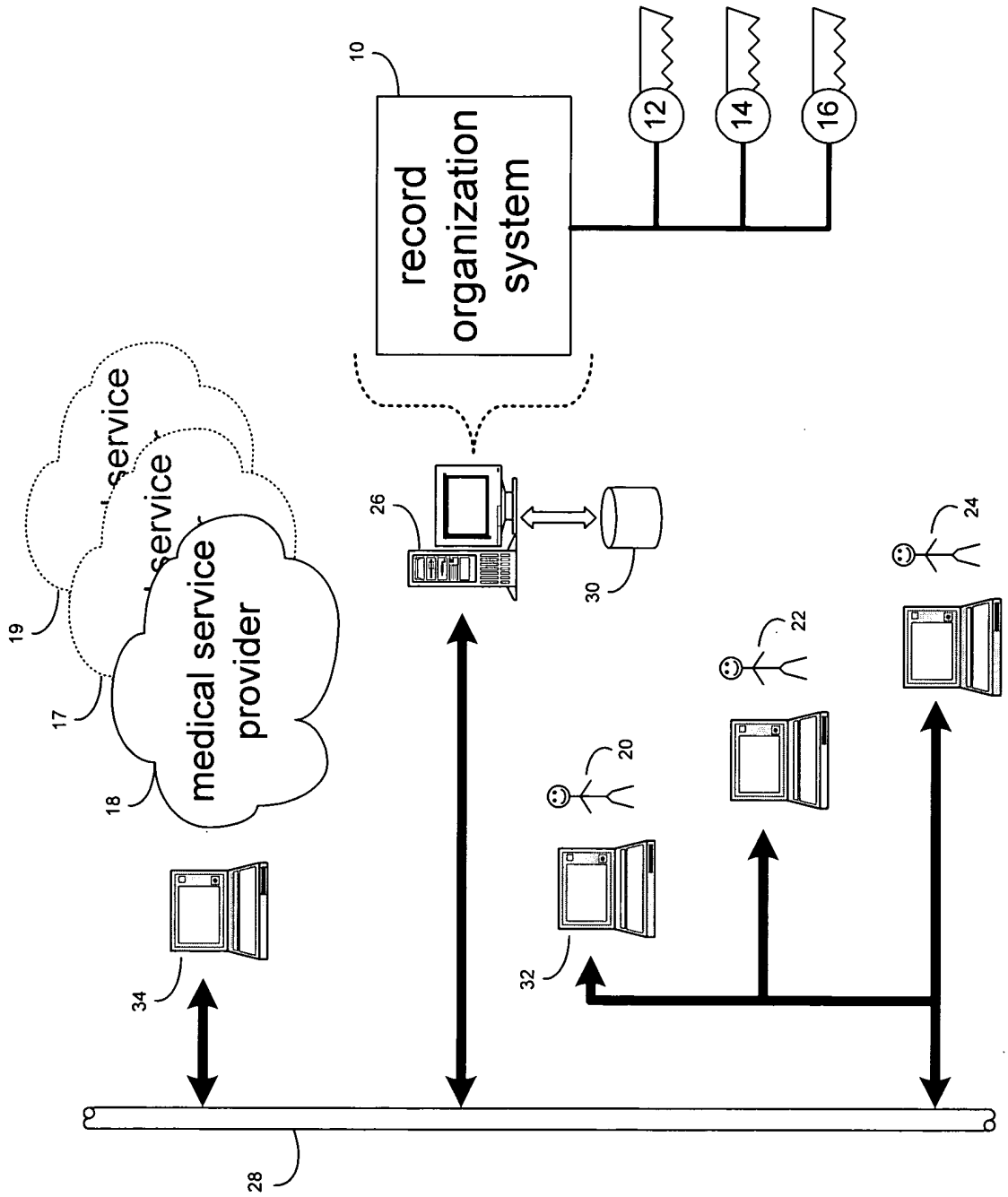
10
record organization system
12
14
16
service
service
medical service provider
19
17
18
26
30
24
22
20
32
34
28

Fig. 1

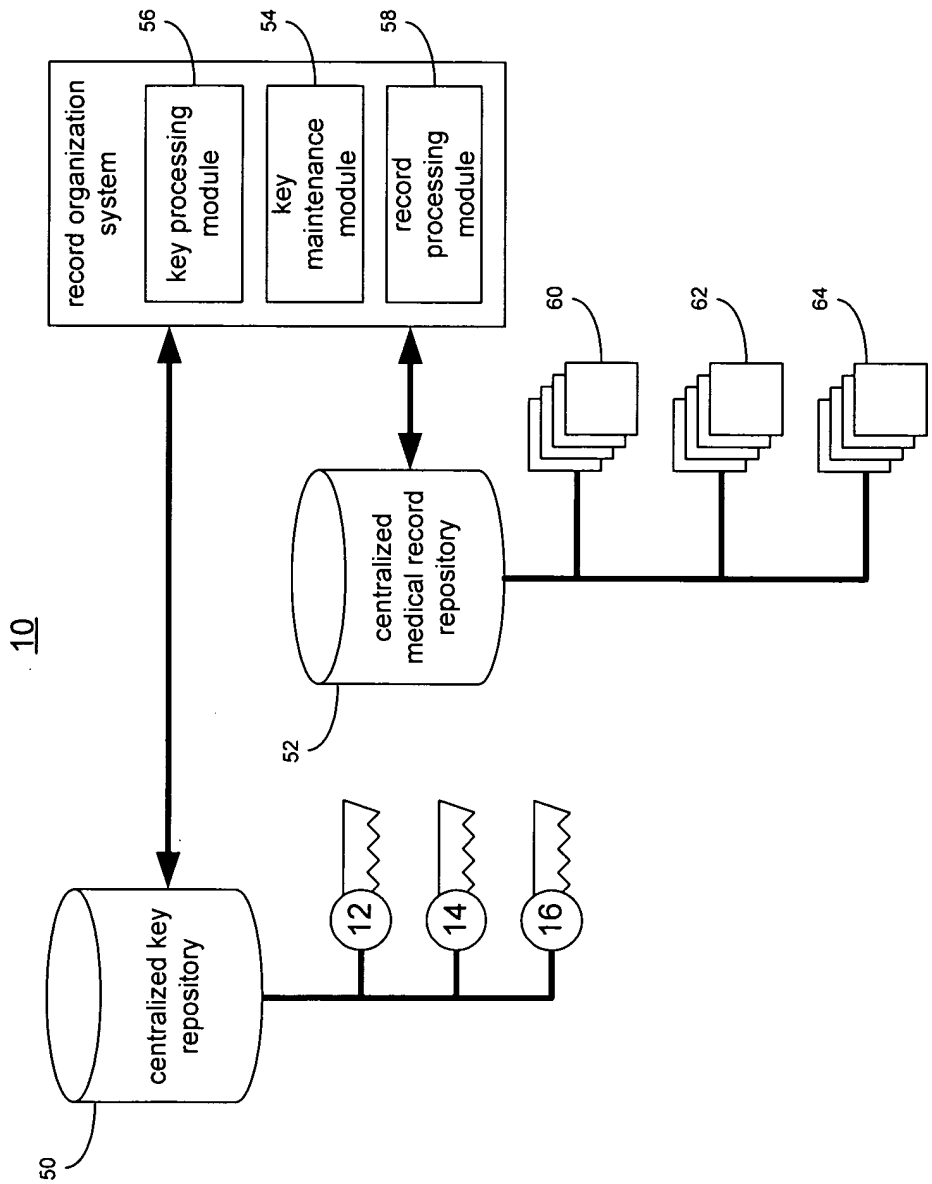
10
record organization system
key processing module
key maintenance module
record processing module
56
54
58
60
62
64
centralized medical record repository
52
centralized key repository
50
12
14
16

Fig. 2

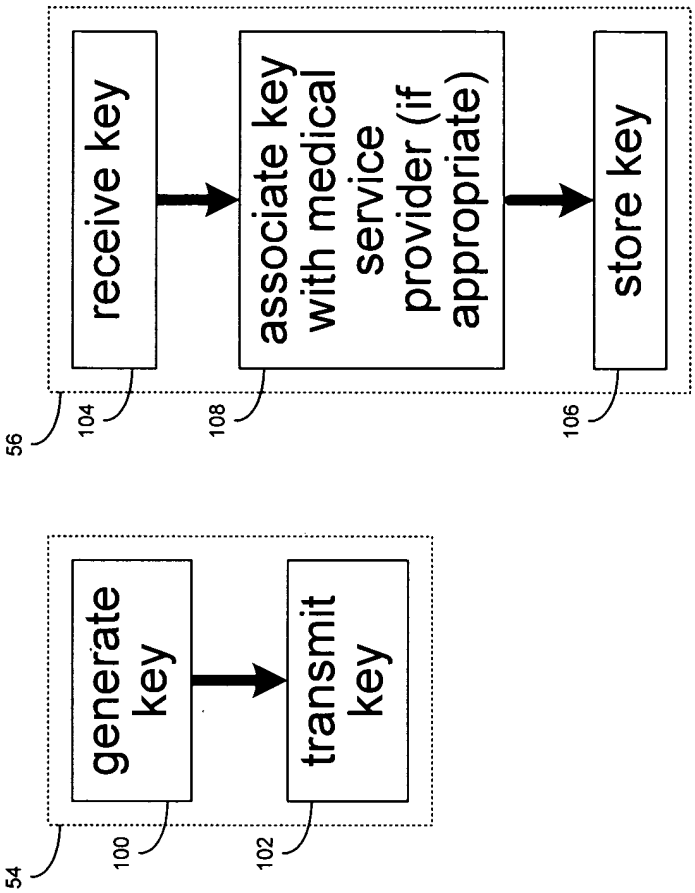
receive key
associate key with medical service provider (if appropriate)
store key
56
104
108
106
generate key
transmit key
54
100
102

Fig. 3

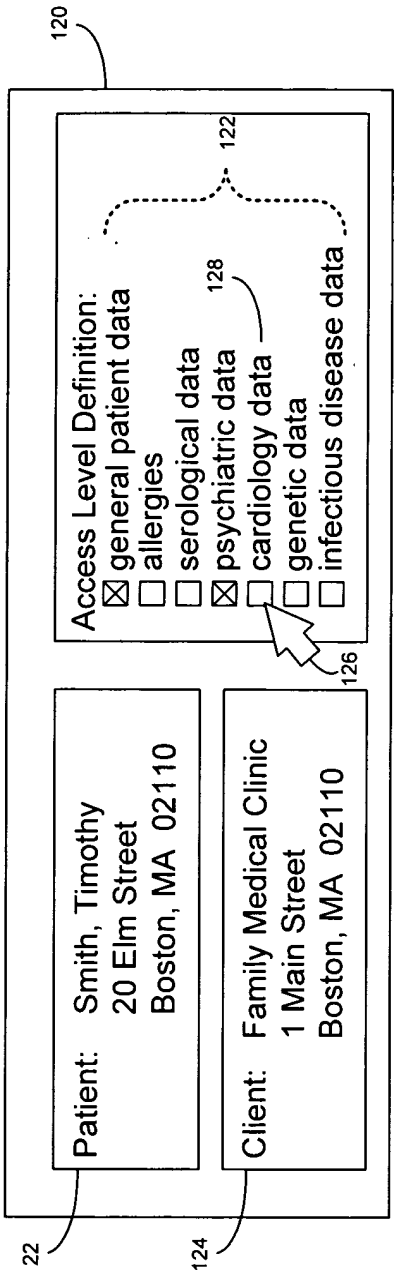
120
122
Access Level Definition:
☒ general patient data
☐ allergies
☐ serological data
☒ psychiatric data
☐ cardiology data
☐ genetic data
☐ infectious disease data
128
126
Patient: Smith, Timothy
20 Elm Street
Boston, MA 02110
Client: Family Medical Clinic
1 Main Street
Boston, MA 02110
22
124

Fig. 4

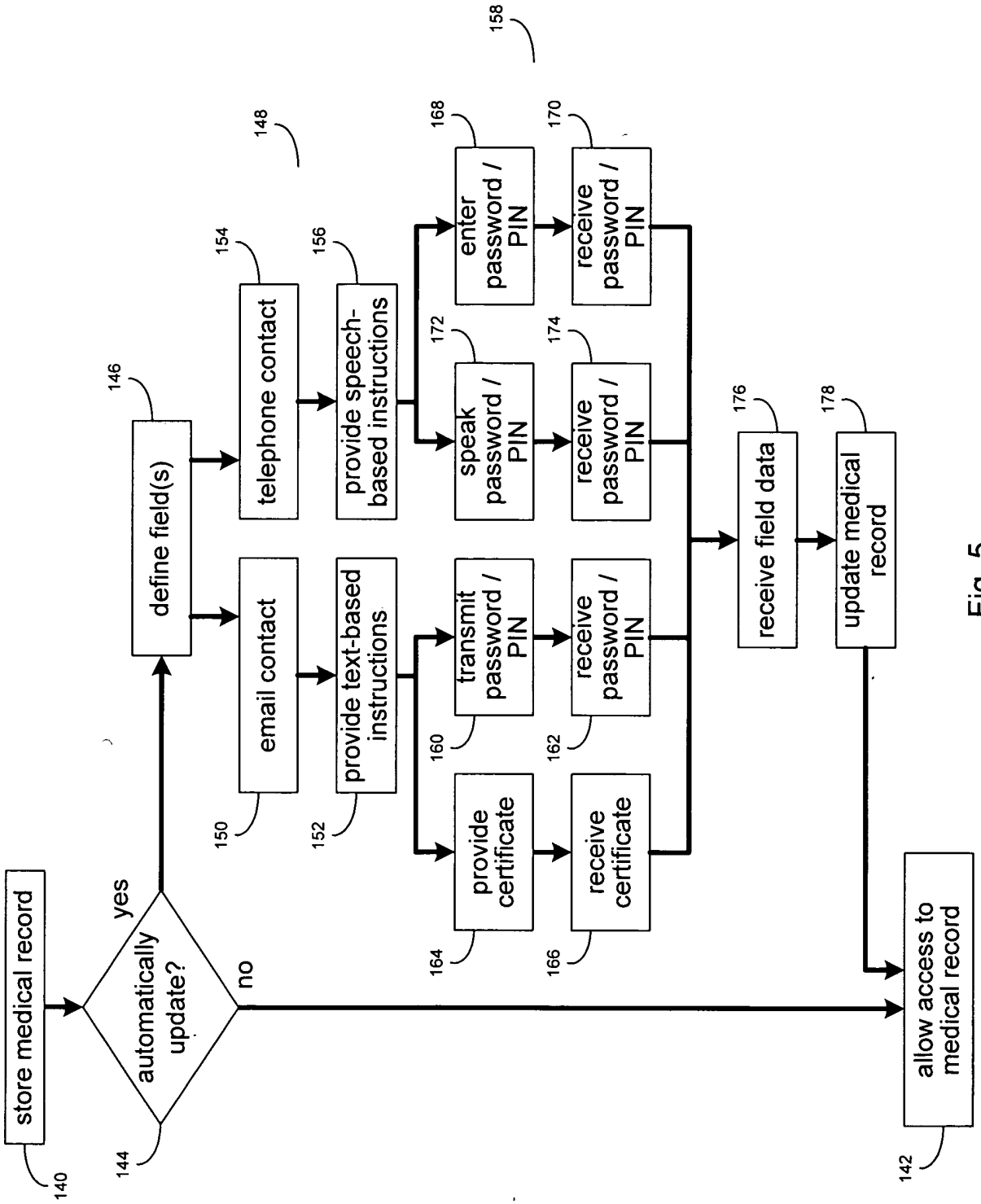
store medical record
140
automatically update?
144
yes
no
define field(s)
146
telephone contact
154
email contact
150
provide speech-based instructions
156
provide text-based instructions
152
148
158
enter password / PIN
168
speak password / PIN
172
provide certificate
164
receive password / PIN
170
receive password / PIN
174
receive certificate
166
transmit password / PIN
160
receive password / PIN
162
receive field data
176
update medical record
178
allow access to medical record
142
58

Fig. 5

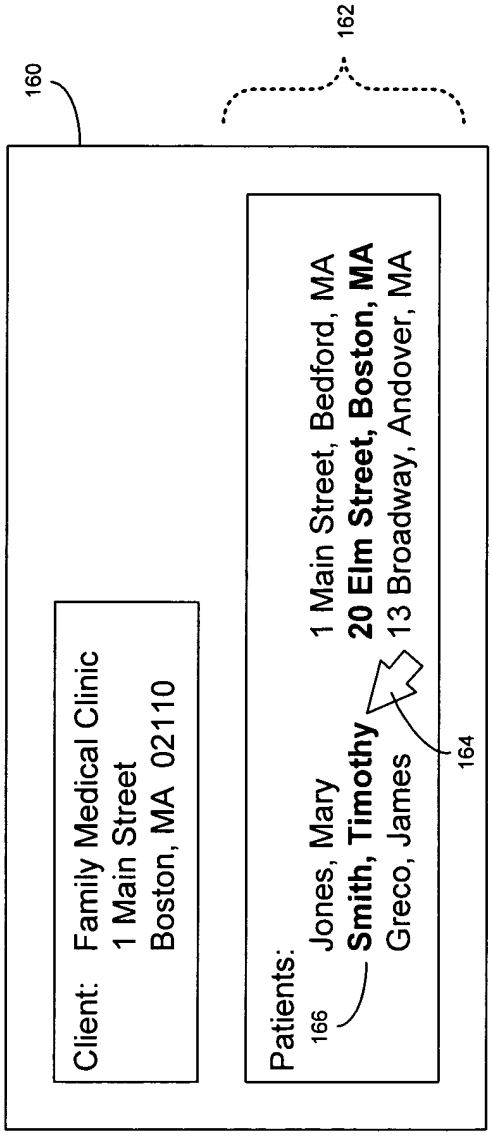
160
162
Client: Family Medical Clinic
1 Main Street
Boston, MA 02110
Patients:
166
Jones, Mary
Smith, Timothy
Greco, James
1 Main Street, Bedford, MA
20 Elm Street, Boston, MA
13 Broadway, Andover, MA
164

Fig. 6

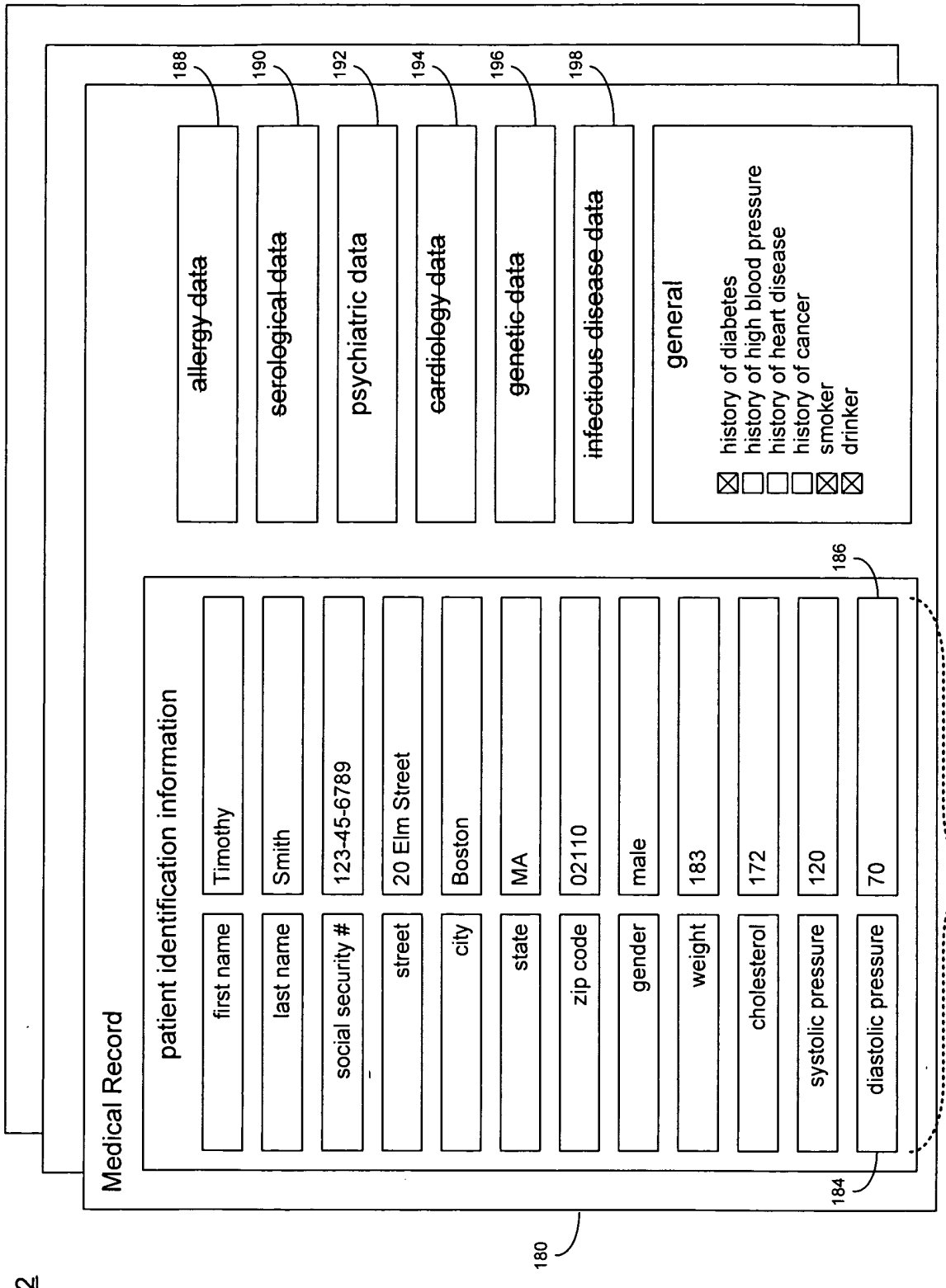
62
Medical Record
180
patient identification information
first name
Timothy
last name
Smith
social security #
123-45-6789
street
20 Elm Street
city
Boston
state
MA
zip code
02110
gender
male
weight
183
cholesterol
172
systolic pressure
120
diastolic pressure
70
184
186
182
allergy data
188
serological data
190
psychiatric data
192
cardiology data
194
genetic data
196
infectious disease data
198
general
history of diabetes
history of high blood pressure
history of heart disease
history of cancer
smoker
drinker

Fig. 7